microscopy technique. The microscopist was blinded to the rotational speed of the samples. The numbers of aggregates 20–60 μm diameter/ml blood are shown below as a function of the rotational speed with or without ReoPro®.

Number of Platelet Aggregates	Rotational Speed			
	180k rpm	180k rpm + ReoPro	140k rpm	Control (0 rpm)
20–60 μm diameter/ml blood*	4131 ± 3336	934 ± 715	420 ± 435	246 ± 293
Range	444–13889	133–2611	111–1722	83–1222

* n = 20; ± Std Dev.; p < 0.002 for all comparisons.

Not all blood samples responded to ReoPro. In 4/20 samples, ReoPro decreased the number of platelet aggregates caused by the rotating burr by less than 20%. Platelet aggregates in all samples subjected to lower speed were decreased by greater than 75%. (Ratio of # of aggregates: 140k/180 + ReoPro 0.69).

Conclusion: This in vitro testing suggests that the use of the Rotablator system at 140,000 rpm (its minimum approved speed) may be more effective in reducing platelet aggregation than ReoPro. Whether reduced speed will provide clinical benefit in reducing slow flow and post procedure creatine kinase elevation is being investigated.

1189-61 Rotational Atherectomy Increases Circulating Platelet-Monocyte Complexes

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Rotational Atherectomy (RA) facilitates the debulking of various lesion types but is associated with an increase in NQMI. Proposed mechanisms include plugging by debris and platelet (plt) activation. Using whole blood flow cytometry we compared several markers of plt activation in peripheral blood: [plt-monocyte complexes, plt-neutrophil (PMN) complexes, P-selectin (CD62), and activated GP IIb-IIIa expression (PAC-1)] in patients undergoing RA with those undergoing coronary angioplasty (PTCA), peripheral angioplasty (PA), or coronary angiography (CA). No consistent increase after the procedure could be detected for plt-PMN, CD-62, or PAC-1. However, plt-monocyte complexes increased following RA:

	RA	PA	PTCA	CA
Pre	14.0 ± 2	13.0 ± 1.5	5.7 ± 0	12.4 ± 2
1 Hr Post	32.2* ± 6.4	16.5 ± 2	23.9 ± 8.3	19.3 ± 5.9
24 Hr Post	15.2 ± 2.6	9.8 ± 4.8	8.5 ± 5.3	14.3 ± 3.4

* p < 0.05 vs Pre

Plt/monocyte complexes represent a stable measure of plt activation in peripheral blood while direct assessment of peripheral plt activation are less conclusive. Measurement of plt/monocyte complexes suggests that RA activates plt more than PA, PTCA or CA. Increased plt activation may represent a mechanism for the higher incidence of NQMI following RA.

1189-62 Intracoronary Adenosine Administered During Rotational Atherectomy of Complex Lesions in Native Coronary Arteries Reduce the Incidence of 'no Reflow' Phenomenon

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Background: Rotational atherectomy (RA) of complex, highly calcified lesions has been associated with a high incidence of 'no reflow' ranging from 6–15% and concomitant myocardial necrosis with adverse prognostic implications. There are no uniform strategies for preventing this complication. The role of intracoronary adenosine for the prevention of this phenomenon during RA has not been fully evaluated.

Methods: We studied the procedural outcome of 122 patients who underwent RA of complex native coronary artery lesions. Fifty two patients received no adenosine, but a variety of other agents. Seventy patients received intracoronary adenosine boluses (24 mcg to 48 mcg prior to and after each RA run). There was no difference in the type of lesion studied, run time, or Burr to artery ratio (0.6–0.7) between the two groups.

Results: Six patients without adenosine experienced 'no reflow' (11.6%) with resultant infarction in the target artery territory, while only one of seventy patients (1.4%, p = 0.023) in the adenosine group experienced no reflow. No untoward complications were observed during adenosine infusion.

Conclusion: Intracoronary adenosine bolus administered during rotational atherectomy is easy, safe and may significantly reduce the incidence of 'no reflow' which may improve the 30 day outcome of this procedure.

1189-63 Coronary Stenting After Rotational Atherectomy Versus Coronary Stenting Alone: An Angiographic Comparison

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Purpose: To retrospectively compare the immediate and six month angiographic angiographic outcome for these two different approaches.

Methods: A total of 178 patients (270 lesions) who had stents implanted in de novo, non occluded vessels and had six month angiographic follow up were classified into two groups: stent alone (146 patients, 226 lesions) and rotostent (32 patients, 44 lesions). Acute and follow-up (FU) results are shown in the table:

	Rotostent	Stent	p value
Lesion Type (B2+C)	97.66%	66.07%	<0.001
Calcium	84.09%	8.93%	<0.001
Pre reference (mm)	2.92 ± 0.45	3.0 ± 0.51	
Lesion length (mm)	12.27 ± 7.37	11.77 ± 6.54	ns
Post MLD (mm)	3.05 ± 0.56	3.0 ± 0.54	ns
Post %DS	3.65 ± 10.37	6.10 ± 10.42	ns
FU MLD (mm)	1.72 ± 0.82	1.91 ± 0.79	ns
FU %DS	40.60 ± 22.62	38.02 ± 21.20	ns
Acute gain (mm)	2.1 ± 0.59	1.98 ± 0.53	ns
Late loss (mm)	1.33 ± 0.71	1.1 ± 0.72	ns
Loss index	0.67 ± 0.37	0.59 ± 0.44	ns
Restenosis	40.91%	31.42%	ns

Conclusion: Despite the presence of more unfavorable angiographic characteristics in the lesions treated with rotablation and stenting, the immediate and long-term angiographic results were similar to those lesions treated with stenting alone.

1189-64 The Role of Adjunctive Balloon Dilatation in Directional Coronary Atherectomy Without Subintimal Resection

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ABACAS (Adjunctive Balloon Angioplasty Following Coronary Atherectomy Study) is a prospective randomized multicenter trial to study whether aggressive debulking with IVUS-guided DCA followed by adjunctive balloon dilatation reduces restenosis. Restenosis rates were 23.6% for adjunctive balloon and 19.6% for DCA alone (n.s.). To elucidate the influence of deep wall resection and adjunctive balloon on the restenosis rates, histological and angiographic study were performed in the same cohort. According to the presence of subintimal resection and adjunctive balloon, eligible 194 pts were divided into four subgroups. DCA with intimal resection (D/I) group consisted of 38 pts, DCA with subintimal resection (D/S) group 57 pts, DCA/balloon with intimal resection (D/I/B) group 48 pts and DCA/balloon with subintimal resection (D/S/B) group 53 pts.

Results: QCA analysis revealed more (n.s.) late loss (D/I: 0.7 ± 0.5, D/S: 0.9 ± 0.6, *D/I/B: 1.2 ± 0.7*, D/S/B: 1.0 ± 0.6 mm) and higher (n.s.) loss index (D/I: 49%, D/S: 59%, *D/I/B: 64%*, D/S/B: 50%) in D/I/B group than the other groups. Restenosis rate of D/I/B group was significantly higher than the other groups (D/I: 13.9%, D/S: 17.6%, *D/I/B: 34.8%*, D/S/B: 12.0%)(p < 0.05).

Conclusion: Adjunctive balloon following DCA without subintimal resection increased restenosis rate. IVUS-guided complete removal of atheroma without adjunctive balloon may be the best strategy on DCA.

1190 Considerations in Use of Heparin, Adenosine, K+ Channel Opener, and GPIIa/IIIb Inhibition During Interventional Procedures

Wednesday, April 1, 1998, Noon–2:00 p.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: Noon–1:00 p.m.

1190-98 Prolonged Heparin After Uncomplicated Coronary Interventions: A Prospective Randomized Trial

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The aim of this trial was to evaluate if heparin infusion after uncomplicated coronary interventions reduced the incidence of acute cardiac complications.